What is claimed is:

1. A data processing method for the hybrid ARQ type II/III on a uplink of a wide-band radio communication system, comprising the steps of:

a) generating a radio link control – protocol data unit (hereinafter, referred to as a RCL-PDU) used for combining pre-transmitted data and a re-transmitted data with a changeable coding rate in a radio link control (hereinafter, referred to as a RLC) layer, and a protocol data unit which includes information from the RLC-PDU (hereinafter, referred to as a HARQ-RLC-Control-PDU);

b) transmitting the RLC-PDU and the HARQ-RLC-Control-PDU to a medium access control dedicated (hereinafter, referred to as a MAC-D) treating a general user part in a medium access control (hereinafter, referred to as a MAC) layer through a logical channel;

c) transforming the RLC-PDU and the HARQ-RLC-Control-PDU received from the receiver RLC layer to MAC-PDU and HARQ-MAC-Control-PDU and transmitting the transformed MAC-PDU and the HARQ-MAC-Control-PDU to a physical layer through a transport channel; and

d) transforming the MAC-PDU and the HARQ-MAC-Control-PDU received from the MAC-D to a radio transmission form and then transmitting them to a receiver through the physical layer.

2. The data processing as recited in the claim 1, wherein the HARQ-RLC-Control-PDU includes a sequence number and a version number of the RLC-PDU and data identifying information to identify the RLC-PDU.

3.   The data processing method as recited in the claim 2, further includes the steps of:

e) storing a received RLC-PDU to a buffer and generating a data identifier to identify the RLC-PDU, then transmitting the RLC-PDU and the HARQ-RLC-Control-PDU to the MAC-D of the receiving MAC layer through a transport channel;

f) transmitting the HARQ-RLC-Control-PDU and the data identifier to the receiving RLC layer through a logical channel;

g) transmitting a sequence number and a version number acquired by analyzing the HARQ-RLC-Control-PDU to a radio resource control (hereinafter, referred to as a RRC) layer with the data identifier;

h) transmitting the sequence number, the version number and the data identifier to the physical layer;

i) determining whether to decode the RLC-PDU stored in the buffer directly by using the sequence number, the version number and the data identifier or to decode after combining with the RLC-PDU of a previous version, then transmitting the decoded RLC-PDU to a receiver physical layer;

j) transmitting the decoded RLC-PDU to the MAC-D through the transport channel;

k) transmitting the RLC-PDU received from the receiving physical layer to the receiving RLC layer through the logical channel; and

l) transmitting the RLC-PDU after analyzing it in the RLC layer to an upper layer and transmitting a response to the receiver RLC layer.

4.   The data processing method as recited in the claim 3, wherein in the step

g), transmitting the sequence number and the version number acquired by analyzing the

HARQ-RLC-Control-PDU in the receiving RLC layer to the receiving RRC layer through

a CRLC-HARQ-IND primitive with the data identifier.

5.   A data processing method for the hybrid ARQ type II/III on an uplink of

a wide-band radio communication system, comprising the steps of:

a) storing a radio link control – protocol data unit (hereinafter, referred

to as a RLC-PDU) to a buffer and generating a data identifier to identify the RLC-PDU

then, transmitting the RLC-PDU with a protocol data unit which includes information

from the RLC-PDU (hereinafter, referred to as a HARQ-RLC-Control-PDU) to a medium

access control dedicated (hereinafter, referred to as a MAC-D), which treats a general user

equipment of a MAC layer, through a transport channel;

b) transmitting the HARQ-RLC-Control-PDU and the data identifier to

the RLC layer through a logical channel;

c) transmitting a sequence number and a version number acquired by

analyzing the HARQ-RLC-Control-PDU to a radio resource control (hereinafter, referred

to as a RRC) with the data identifier;

d) transmitting the sequence number, the version number and the data

identifier to the physical layer;

e) determining whether to decode the RLC-PDU stored in the buffer

directly by using the sequence number, the version number and the data identifier, or to

decode the RLC-PDU after combining it with an RLC-PDU of a previous version, then

transmitting the decoded RLC-PDU to a physical layer;

f) transmitting the decoded RLC-PDU to the MAC-D through the transport channel;

g) transmitting the RLC-PDU received from the physical layer to the RLC layer through the logical channel; and

h) transmitting the RLC-PDU after analyzing it in the RLC layer to an upper layer and transmitting a response to the RLC layer of the user equipment.

6.   The data processing method as recited in claim 5, wherein in the step c) comprises transmitting the sequence number and the version number acquired by analyzing the HARQ-RLC-Control-PDU in the RLC layer to the RRC layer through a CRLC-HARQ-IND primitive with the data identifier.

7.   The data processing method as recited in claim 5, wherein in the step d) comprises transmitting the sequence number, the version number and the data identifier to a physical layer through a CPHY-HARQ-REQ primitive.

8.   The data processing method as recited in claim 5, wherein the radio network is an asynchronous radio network.

9.   The data processing method as recited in claim 1, wherein the logical channel is a dedicated traffic channel (DTCH) for transmitting the RLC-PDU and the HARQ-RLC-Control-PDU.

10.   The data processing method as recited in claim 1, wherein the logical channel includes the DTCH and a dedicated control channel (DCCH) for transmitting the RLC-PDU and the HARQ-RLC-Control-PDU, respectively.

11.   The data processing method as recited in claim 1, wherein the transport channel is a dedicated channel (DCH) for transmitting the RLC-PDU and the HARQ-RLC-Control-PDU.

12.   The data processing method as recited in claim 1, wherein the physical channel is a dedicated physical channel (DPCH) for transmitting the RLC-PDU and the HARQ-RLC-Control-PDU.

13.   The data processing method as recited in claim 1, wherein the transmitter is a user equipment (UE).

14.   The data processing method as recited in claim 13, wherein the receiver is part of an asynchronous radio network.

15.   A computer readable data recording media having instructions for implementing a data processing method for a hybrid ARQ type II/III on a uplink of a wide-band radio communication system having a processor, comprising the functions of:

a) generating a radio link control – protocol data unit (hereinafter, referred to as a RCL-PDU) used for combining pre-transmitted data and a re-transmitted data with a changeable coding rate in a radio link control (hereinafter, referred to as a RLC) layer and, and a protocol data unit which includes information of the RLC-PDU (hereinafter, referred to as a HARQ-RLC-Control-PDU);

b) transmitting the RLC-PDU and the HARQ-RLC-Control-PDU to a medium access control dedicated (hereinafter, referred to as a MAC-D) treating a general user part in a medium access control (hereinafter, referred to as a MAC) layer through a logical channel;

c) transforming the RLC-PDU and the HARQ-RLC-Control-PDU received from the RLC layer to MAC-PDU and HARQ-MAC-Control-PDU and transmitting the transformed MAC-PDU and the HARQ-MAC-Control-PDU to a physical layer through a transport channel; and

d) transforming the MAC-PDU and the HARQ-MAC-Control-PDU received from the MAC-D to a radio transmission form and then transmitting them to a receiver through the physical layer.

16. The computer readable data recording media as recited in claim 15, further includes the functions of:

e) storing a received RLC-PDU to a buffer and generating a data identifier to identify the RLC-PDU, then transmitting the RLC-PDU and the HARQ-RLC-Control-PDU to the MAC-D of the receiving MAC layer through the transport channel;

f) transmitting the HARQ-RLC-Control-PDU and the data identifier to the receiving RLC layer through a logical channel;

g) transmitting a sequence number and a version number acquired by analyzing the HARQ-RLC-Control-PDU to a radio resource control (hereinafter, referred to as a RRC) layer with the data identifier;

h) transmitting the sequence number, the version number and the data

identifier to the physical layer;

i) determining whether to decode the RLC-PDU stored in the buffer directly by using the sequence number, the version number and the data identifier or to decode the RLC-PDU after combining it with the RLC-PDU of a previous version, then, transmitting the decoded RLC-PDU to a receiver physical layer;

j) transmitting the decoded RLC-PDU to the MAC-D through the transport channel;

k) transmitting the RLC-PDU received from the receiving physical layer to the receiving RLC layer through the logical channel; and

l) transmitting the RLC-PDU after analyzing it in the RLC layer to an upper layer and transmitting a response to the receiver RLC layer.

17.   A computer readable data recording media having instructions for implementing a data processing method for a hybrid ARQ type II/III on a uplink of a wide-band radio communication system having a processor, comprising the functions of:

a) storing a radio link control – protocol data unit (hereinafter, referred to as a RLC-PDU) to a buffer and generating a data identifier to identify the RLC-PDU, then, transmitting the RLC-PDU with a protocol data unit which includes information from the RLC-PDU (hereinafter, referred to as a HARQ-RLC-Control-PDU) to a medium access control dedicated (hereinafter, referred to as a MAC-D), treating a general user equipment of a MAC layer, through a transport channel;

b) transmitting the HARQ-RLC-Control-PDU and the data identifier to the RLC layer through a logical channel;

c) transmitting a sequence number and a version number acquired by analyzing the HARQ-RLC-Control-PDU to a radio resource control (hereinafter, referred to as a RRC) with the data identifier;

d) transmitting the sequence number, the version number and the data identifier to the physical layer;

e) determining whether to decode the RLC-PDU stored in the buffer directly by using the sequence number, the version number and the data identifier, or to decode the RLC-PDU after combining it with an RLC-PDU of a previous version, then transmitting the decoded RLC-PDU to the physical layer;

f) transmitting the decoded RLC-PDU to the MAC-D through the transport channel;

g) transmitting the RLC-PDU received from the physical layer to the RLC layer through the logical channel; and

h) transmitting the RLC-PDU after analyzing it in the RLC layer to an upper layer and transmitting a response to the RLC layer of the user equipment.